

## Tables

**Table S1, related to STAR methods.**

Table of plasmids used.

Plasmid	Insert	Construction/Source
pCEP4	-	Thermo Fisher Scientific (Cat. #V044-50)
pBlueSkript II SK(-)	-	Laboratory collection
pFC53	mouse Airn promoter region 2	Dr. F. Chédin (ref. (Ginno et al., 2012))
pM49.2	-	Dr. J. Griesenbeck (ref. (Griesenbeck et al., 2004))
pcDNA3.1 Hygro (+)	-	Laboratory collection
pLVXtight Puro ΔN1-27 RH-FLAG	ΔN1-27 RNase H1-FLAG	Dr. C. Stork (ref. (Sollier et al., 2014))
pcDNA3.1 ΔN1-27 RH-FLAG	NotI-ΔN1-27 RNase H1-FLAG-EcoRI	NotI/EcoRI fragment from pLVXtight Puro ΔN1-27 RH-FLAG blunted and cloned into pcDNA3.1 Hygro (+) cut with EcoRV
pEco3Δ TRE ECFP-beta-Actin	-	Dr. Julie Sollier
pBlueSkript 3xLEXA	AfIII-3xLEXA-AfIII	Insertion of AfIII cut SH34/SH35 PCR amplicon from pM49.2 into pBlueSkript II SK(-) cut with AfIII
pBlueSkript 3xLEXA ECFP	KpnI-ECFP-Xhol	KpnI/Xhol fragment from pEco3Δ TRE ECFP-beta-Actin into pBlueSkript 3xLEXA cut with KpnI/Xhol
pSH24	KpnI-pTRE_tight-BsrGI	Insertion of KpnI/BsrGI cut SH11/SH12 PCR amplicon from pEco3Δ TRE ECFP-beta-Actin into pCEP4 cut with KpnI/BsrGI
pSH24 1xLEXA	BglII-3xLEXA-BglII	Insertion of BglII cut SH13/SH14 PCR amplicon from pM49.2 into pSH24 cut with BglII
pSH24 2xLEXA	BglII-3xLEXA-BglII	Insertion of blunted SH13/SH14 PCR amplicon from pM49.2 into pSH24 1xLEXA cut with NruI
pSH25 2xLEXA	-	Sall fragment from pSH24 2xLEXA reinserted in pSH24 2xLEXA in opposite direction
pSH26	KpnI-ECFP-Xhol	KpnI/Xhol fragment from pEco3Δ TRE ECFP-beta-Actin into pSH24 2xLEXA cut with KpnI/Xhol
pSH27	KpnI-ECFP-Xhol	KpnI/Xhol fragment from pEco3Δ TRE ECFP-beta-Actin into pSH25 2xLEXA cut with KpnI/Xhol
pBlueSkript 3xLEXA mAIRN	KpnI-mAIRN-BamHI	KpnI/BamHI fragment from pFC53 into pBlueSkript 3xLEXA cut with KpnI/BamHI
pBlueSkript 3xLEXA mAIRN_rep	Styl-CGAACTCCAGCAGGACCATGT-Styl	SH24/SH25 annealed and cloned into pBlueSkript 3xLEXA mAIRN cut with Styl
pSH36	KpnI-mAIRN-BamHI	KpnI/BamHI fragment from pBlueSkript 3xLEXA mAIRN_rep into pSH24 2xLEXA cut with KpnI/BamHI
pSH37	KpnI-mAIRN-BamHI	KpnI/BamHI fragment from pBlueSkript 3xLEXA mAIRN_rep into pSH25 2xLEXA cut with KpnI/BamHI

**Table S2, related to STAR methods.**

Table of oligonucleotides used.

Oligo	Sequence (5' - 3')	Description
SH11	GATTGTACACGAGTTACTCCCTATC AGT	primer used for PCR together with SH12 to amplify pTRE_tight promoter from pEco3Δ TRE ECFP-beta-Actin
SH12	TCCAGCTCGACCAGGATG	primer used for PCR together with SH11 to amplify pTRE_tight promoter from pEco3Δ TRE ECFP-beta-Actin
SH13	GATAGATCTAACGTACTACTGTACAT ATAAC	primer used for PCR together with SH14 to amplify 3xLEXA binding cluster from pM49.2
SH14	GACAGATCTCATGGTGCTGTATATAA A	primer used for PCR together with SH13 to amplify 3xLEXA binding cluster from pM49.2
SH21	ACATGGTCCTGCTGGAGTTC	primer in 3` end of ECFP and mAIRN genes, used for RT-qPCR to determine transcription levels of pSH26/pSH27/pSH36/pSH37 and DRIP enrichment together with SH40 and to prepare Southern probe template spanning the mAIRN gene together with SH64
SH24	CTTGGCGAACTCCAGCAGGACCATG TGC	can be annealed to SH25 to generate dsDNA containing a primer binding site for SH21 with ends that are compatible with StyI
SH25	CAAGGCACATGGTCCTGCTGGAGTT CGC	can be annealed to SH24 to generate dsDNA containing a primer binding site for SH21 with ends that are compatible with StyI
SH34	AGAACATGTAACGTACTACTGTACAT ATAAC	primer used for PCR together with SH35 to amplify 3xLEXA binding cluster from pM49.2
SH35	AGAACATGTTCCATGGTGCTGTATAT AAA	primer used for PCR together with SH34 to amplify 3xLEXA binding cluster from pM49.2
SH40	CGAGAGAGGCTAAGGGTGAA	primer used for RT-qPCR together with SH21 to determine mAIRN transcription levels and DRIP enrichment from pSH36/pSH37 (primer pair mAIRN)
SH49	TGGTTTGTCCAAACTCATCAA	primer used for RT-qPCR together with SH21 to determine ECFP transcription levels from pSH26/pSH27 and together with SH113 to prepare Southern probe template spanning the ECFP gene
SH60	GGGAGGCTAACTGAAACACG	primer in pSH36/pSH37 constructs used for qPCR together with SH61 to determine DRIP enrichment (primer pair A)
SH61	GGTGGGGAAAAGGAAGAAC	primer in pSH36/pSH37 constructs used for qPCR together with SH60 to determine DRIP enrichment (primer pair A)
SH62	TTTCGCTGTTGTCCTTT	primer in oriP used for qPCR together with SH63 to determine plasmid copy number and DRIP enrichment (primer pair B)
SH63	CATTTTCGTCCCTCCAACAT	primer in oriP used for qPCR together with SH62 to determine plasmid copy number and DRIP enrichment (primer pair B)
SH64	ACATCCTGGGAACTGAGGT	primer in mAIRN used for PCR together with SH21 to prepare Southern probe template spanning the mAIRN gene
SH66	AGCACAGAGCCTCGCCTT	primer used for preparation of Southern probe template together with SH67 spanning a promoter fragment of the beta-Actin locus
SH67	CCGGCTCAGACAAAGACC	primer used for preparation of Southern probe template together with SH66 spanning a promoter fragment of the beta-Actin locus

SH73	CGGGGAAAAGCCCTATAAAT	primer in ZNF544 locus used for qPCR together with SH74 to determine DRIP enrichment
SH74	TCCACATTCACTGCATTCGT	primer in ZNF544 locus used for qPCR together with SH73 to determine DRIP enrichment
in1 (F)	CGGGGTCTTGCTCTGAGC	primer in beta-Actin intron 1 region used for qPCR together with in1 (R) to determine plasmid copy number (ref. (Skourtis-Stathaki et al., 2011))
in1 (R)	CAGTTAGGCCAAAGGAC	primer in beta-Actin intron 1 region used for qPCR together with in1 (F) to determine plasmid copy number (ref. (Skourtis-Stathaki et al., 2011))
bAct(F)	CCTGGCACCCAGCACAAT	primer used for RT-qPCR together with bAct(R) to determine beta-Actin transcription levels
bAct(R)	GGGCCGGACTCGTCATACT	primer used for RT-qPCR together with bAct(F) to determine beta-Actin transcription levels
SH113	ACGTAAACGGCCACAAGTTC	primer in ECFP used for PCR together with SH49 to prepare Southern probe template spanning the ECFP gene
RPL13A_F	AGGTGCCTTGCTCACAGAGT	primer in RPL13A gene used for qPCR together with RPL13A_R to determine DRIP enrichment (Bhatia et al., 2014)
RPL13A_R	GGTTGCATTGCCCTCATTAC	primer in RPL13A gene used for qPCR together with RPL13A_F to determine DRIP enrichment (Bhatia et al., 2014)
APOE_F	CCGGTGAGAACAGCGCAGTCGG	primer in APOE gene used for qPCR together with APOE_R to determine DRIP enrichment (Bhatia et al., 2014)
APOE_R	CCCAAGCCCCGACCCCGAGTA	primer in APOE gene used for qPCR together with APOE_F to determine DRIP enrichment (Bhatia et al., 2014)
SH141	CCCACCCCAAGACTAAGGTT	primer in FASN gene used for qPCR together with SH142 to determine DRIP enrichment
SH142	ACCAGAACAGGCCGTGATAA	primer in FASN gene used for qPCR together with SH141 to determine DRIP enrichment
SH153	ACTGCGTGGTGAGTGAGAG	primer in SLC22A1 gene used for qPCR together with SH154 to determine DRIP enrichment
SH154	GGAACCTGTCTCTGTCAGCT	primer in SLC22A1 gene used for qPCR together with SH153 to determine DRIP enrichment
SH155	CTTGAGGTGTTGAGGGCC	primer in PCBP2 gene used for qPCR together with SH156 to determine DRIP enrichment
SH156	CTACGAGGAGAGAGGGCTGTG	primer in PCBP2 gene used for qPCR together with SH155 to determine DRIP enrichment
SH163	AAAAGTAGTGGTGGCAGGGA	primer in USP4 gene used for qPCR together with SH164 to determine DRIP enrichment
SH164	GCCATGAAGAACAGCGCTCTG	primer in USP4 gene used for qPCR together with SH163 to determine DRIP enrichment
SH165	GGTCTCATT CCTGTCA CCCA	primer in TARBP2 gene used for qPCR together with SH166 to determine DRIP enrichment
SH166	CTACTCTGGAGGCTGAGGTG	primer in TARBP2 gene used for qPCR together with SH165 to determine DRIP enrichment